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DEC 2 0 1991

Federal Communications Commission
Office of the Secretary

Federal Communications Commission
1919 M Street
Washington, DC 20554

Subject: Comments on FCC NPRM 91-337, MM Docket No. 87-268

Dear Mr. Secretary and Commissioners,

Enclosed please find fifteen (15) copies of Comments on FCC NPRM 91-337, MM Docket No. 87-268: In the Matter of Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service.

We would appreciate three copies each being delivered to Chairman Sikes, and to Commissioners Barrett, Duggan, Marshall, and Quello.

Sincerely,

Branko J. Gerovac

18 December 1991

Before the
Federal Communications Commission
1919 M Street
Washington, DC 20554

In the Matter of	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

COMMENTS OF
Branko J. Gerovac
Corporate Research and Architecture
Digital Equipment Corporation

These comments are directed to FCC NPRM 91-337 Paragraph 47: Compatibility with Other Media. For Digital Equipment Corp., I pursue development of television, communications, and computing technologies. I am a charter member of the Committee on Open High Resolution Systems, and edited and contributed to many of the documents produced by COHRS. And, I contribute to the SMPTE Header/Descriptor group.

The FCC is to be commended for recognizing the importance of the interplay and harmonization of ATV with other applications and industries. The recognition of a few critical features and their presence in a new television standard will offer the full potential of ATV to best benefit the broad interests of society, education, health, and industry.

Television, communications, and computing are increasingly based on a common set of technologies -- the clear and rapid move to computational digital image representation and digital communication. The technologies are improving at an increasingly rapid rate.

The adoption of an ATV system that is interoperable, extensible, and scalable will bring about a new synergy among industries. Such an ATV system would: (a) promote United States strengths in hardware and software; (b) foster innovation and entrepreneurial opportunities; (c) enhance competitiveness; and (d) stimulate rapid development in the utility and diversity of products and services for consumers, business, and government.

Interoperability permits the optimal sharing of information across generation, media, carrier, and equipment technologies and services. Thereby, material generated for one application will be useful and can be shared in other contexts -- in whole, in part, or in combination with other material.

Extensibility is the ability to incorporate future unforeseen technological and algorithmic advances and improvements in quality, performance, and functionality without obsoleting existing components and infrastructure. The development of digital processing for video

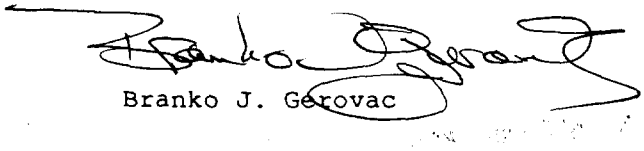
compression and communications across diverse media is progressing very rapidly. No fixed video data encoding (nor small number of non-extensible standards) will meet longevity requirements.

Scalability is the ability to employ, at a given point in time, uniform generation, transmission, and display characteristics to support a range of quality and cost. The variety of application requirements already produce the need for a variety of display characteristics. With a scalable encoding, different raster sizes/resolutions can be extracted from the same data stream. Thus, picture quality (and display cost) would depend on the desires of the user and needs of the application or service.

Key to achieving the objectives of a harmonious, interoperable, extensible, and scalable ATV system is a universal self-identifying header mechanism. With the existence of a universal header, major application areas and uses of video data streams can cross the fundamental hurdle of interoperability. A minimal header of some sort is needed by any video data encoding. A common universal header permits alternate encodings to exist harmoniously on a single communications data stream and for all equipment to handle (if not interpret) the data stream. Thereby, individual application areas will gain broad utility by incorporating a universal header, and will not be limited to point solutions. The use of a universal header is consistent with desires for low cost receivers.

The FCC has a rare historic opportunity in the confluence of potential technological good, industrial good, and social good. Some fear has been expressed that addressing topics of harmony will needlessly delay the ATV process. That is not the case. There is greater exposure in not addressing the topics. It is a credit to the FCC (and delegated bodies) that the ATV process is considering the system topics of interoperability, extensibility, and scalability.

Respectfully Submitted,



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